Team 3 Project Proposal

Yuldoshkhujaev Shakhzod, Arias Ramon, Park SungJun, Juhn Yujin

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Abstract

SwipeBite is a user-friendly app designed to simplify restaurant selection for couples and small groups. It addresses the common dilemma of indecision when choosing where to eat, which can be time-consuming and lead to unhealthy choices. SwipeBite streamlines the decision-making process through a Tinder-style matching system, allowing users to quickly find restaurants that suit their preferences.

This proposal highlights the limitations of existing food-oriented apps, such as unattractive interfaces and limited restaurant information. SwipeBite focuses on providing an intuitive and visually appealing design, offering comprehensive restaurant details, including visuals, menus, pricing, parking, reviews, hours, and contact information. The app caters to Korean users by integrating data from Naver Maps and offering bilingual support.

Our primary goal is to provide an enjoyable solution to the restaurant selection challenge, reducing decision time and promoting healthier dining choices. SwipeBite understands the frustrations faced by diners and seeks to enhance the dining experience while saving time.

SwipeBite isn't just an app; it's a source of relief and enjoyment, ensuring that every meal is an opportunity for cherished moments.

1 Introduction

This is a project proposal for the development of SwipeBite, a revolutionary app designed to streamline the process of choosing a place to eat, ultimately saving precious time for couples and small groups of friends. In today's fast-paced world, the task of selecting a dining establishment often consumes an excessive amount of time, leading to indecision and the potential for unhealthy, fast-food choices. According to a report by the Daily Mail in the UK, couples spend up to 132 hours annually deliberating on where to dine. This staggering amount of time is a valuable resource that could be allocated to more productive activities.

1.1 Importance of Suggested Problem

The importance of addressing this problem cannot be overstated. Modern society is characterized by increasingly busy schedules, and people are constantly seeking ways to optimize their time. SwipeBite aims to provide a solution by simplifying the dining decision-making process, ensuring that users can make an informed choice quickly and conveniently.

Previous attempts to tackle this issue have fallen short in several crucial aspects. Existing food-oriented apps, often touted as the "Tinder for food," suffer from multiple shortcomings.

1.2 Previous Approaches

Firstly, their user interfaces and user experiences are often unappealing and overly complex, hindering the app's primary objective of making dining decisions easier. A cumbersome or unattractive UI can deter users from the application, defeating its purpose.

Furthermore, these apps typically provide insufficient information about the restaurants they feature, often limited to the name and location. However, making a well-informed dining choice requires more comprehensive details. SwipeBite seeks to address this deficiency by providing users with a wealth of information about each restaurant, including menu options, pricing, cuisine type, ratings, and reviews, thus enabling them to make decisions that align with their preferences.

Lastly, most existing food-related apps are primarily tailored to English-speaking, Western countries. This limitation renders them virtually useless for users in non-English-speaking regions, such as Korea. SwipeBite aims to overcome this constraint by offering a more Korea-centered solution, ensuring that Korean people can benefit from its time-saving features.

1.3 Proposed Solution

In response to the identified shortcomings of existing dining decision-making applications, we present an innovative solution: SwipeBite, a Tinder-style app designed specifically for restaurant selection. Our approach draws inspiration from the concept of "matching" popularized by Tinder but applies it to the realm of dining choices. Instead of matching with potential dates, SwipeBite enables users to match with restaurants that align with their culinary preferences, thereby simplifying the process of choosing where to eat with significant others or friends.

1.3.1 SwipeBite Process

Swiping: The core premise of SwipeBite is user-friendly and straightforward. Users will be presented with a curated selection of restaurants and food establishments based on their individual preferences. They can swipe left to indicate disinterest or swipe right to express interest in a particular restaurant.

Matching: When both you and your significant other or friend swipe right on the same restaurant, a match is established. This match signifies that both parties wish to dine at that particular establishment, effectively making a dining decision. This process eliminates the need for prolonged discussions about dining options, as all relevant choices and information are readily available to both users.

1.3.2 User Interface and Experience

We recognize that an intuitive and visually appealing user interface (UI) is crucial to the success of our app. To address the issues faced by previous dining decision apps, we will prioritize creating a UI that is user-friendly, convenient, and aesthetically pleasing. By learning from the mistakes of prior approaches, we aim to design an interface that seamlessly guides users through the decision-making process, enhancing the overall experience.

1.3.3 Information Provision

To facilitate well-informed decisions, SwipeBite will provide an extensive range of information about each featured restaurant, going beyond mere names and locations. Users can expect to access the

following details:

- **Visuals**: High-quality images of the restaurant's ambiance and dishes.
- **Menu**: A comprehensive menu with detailed descriptions of food offerings.
- **Pricing**: Information about average customer spending.
- **Parking**: Details on whether the restaurant has on-site parking.
- **Reviews**: User-generated reviews and ratings.
- **Operating Hours**: Hours of operation for planning convenience.
- **Contact Information**: A contact phone number for reservations or inquiries.

Despite the wealth of information, we will ensure that the presentation remains user-friendly and not overwhelming. Our goal is to provide a convenient and accessible resource for users, ultimately simplifying the dining decision-making process.

1.3.4 SwipeBite as a Korean App

Recognizing the unique needs of Korean users, we will integrate data from Naver Maps, one of the most trusted mapping services in Korea. This data will enable us to provide accurate and up-to-date information on restaurants within Korea, ensuring a tailored experience for our Korean users. Furthermore, SwipeBite will offer a bilingual UI, with both English and Korean language options, to enhance user comfort and accessibility.

In summary, SwipeBite is poised to revolutionize the way people choose restaurants by introducing a matching system that simplifies decision-making. Our commitment to an intuitive UI, comprehensive information, and a global reach, coupled with a dedicated focus on Korean users, sets us apart from existing solutions. SwipeBite aims to save users valuable time and empower them to make enjoyable dining choices, contributing to a more efficient and satisfying lifestyle.

2 Motivation

The motivation behind the development of SwipeBite is born out of empathy for couples and small groups of friends who frequently find themselves in the all-too-familiar dilemma of deciding where to eat. We understand the frustrations and time-consuming nature of this process, and our primary objective is to alleviate this burden through the creation of an innovative and user-friendly app.

2.1 Goal of the Project

Our heartfelt goal for the SwipeBite project is to:

- Provide a seamless and enjoyable solution to the perennial challenge of selecting a restaurant, particularly for couples.
- Significantly reduce the hours spent in indecision, allowing more quality time together.
- Encourage healthier dining choices by offering comprehensive restaurant information.

- Elevate the user experience through an intuitive and aesthetically pleasing user interface.
- Extend our solution to a Korean audience while remaining sensitive to the unique needs of users from diverse cultural backgrounds.
- Simplify the dining decision-making process by introducing a matching system akin to Tinder, making the experience effortless, fun, and efficient.

By achieving these heartfelt objectives, SwipeBite aspires to be a source of relief for couples and friends who have long grappled with the age-old question of "Where should we eat?" Our app is not just about saving time; it's about enhancing the joy of dining together and ensuring that every meal is an opportunity for cherished moments. SwipeBite is here to understand, empathize, and provide a solution that truly matters.

3 Related Work

Of course, the concept of a Tinder-like application applied to food is not new, and there have been other projects with similar features, as we have discussed. However, most of them have several limitations that we aim to address in SwipeBite. In this section, we will discuss three main predecessors of our idea and outline the constraints of each of these works.

- **Food Match - Find Where to Eat**
  This application is one of the most popular products in this field. It boasts a user-friendly design, several filters for distance and food type, and it follows the same logic as SwipeBite. Nevertheless, this application lacks a menu board, which is important for users. It also lacks information about the working hours of the restaurant, making it difficult for users to know if the matched place is currently open. The most critical limitation is that this project was originally designed for users in the United States and does not have much information about Korea and its restaurants. This limitation leads to another issue of not having a language selection option. In summary, while the Food Match application aligns with SwipeBite's concept, it has several limitations and drawbacks, making it less useful for the Korean community.
- **Entree**
  Another application that employs our Tinder-like concept can be found in Entree. Similar to the previous application, it allows users to set filters for cuisine and even by meat type. Additionally, it includes a separate section called "Recommended for you," which suggests food based on users' preferences over time. However, despite being first proposed in 2016 and initially available regionally in Los Angeles, New York, and Washington D.C., Entree is still in beta testing as of now. This suggests that the project will take some time before its full release. Moreover, even upon full release, it is likely that Entree will have the same limitation of not being designed for Korea, resulting in a limited number of restaurants and no language selection option. Furthermore, its user interface does not align with modern design principles and appears unappealing and outdated. In summary, while Entree appears ambitious in its field, with features such as food recommendations, it may not gain much popularity in Korea due to its limitations and issues.
- **Dining Code**
  This is perhaps the only application we have found that can assist users in choosing where

to eat while being in Korean. It features an appealing design with a variety of useful filters. Using this app, users can search for famous restaurants in Korea based on food cuisine. They can also change their location to find the nearest options. However, Dining Code differs from SwipeBite's concept in terms of food searching. Dining Code primarily serves as a map for famous restaurants, offering various places to eat without helping users decide what to eat. This can lead to the time-consuming dilemma of food indecision. In SwipeBite, we aim to address this issue and provide assistance in selecting food. In summary, the Dining Code application is very useful for having a vast data set of restaurants per location in Korea, but it falls short in helping users choose food.

The previous approaches for finding food are not inherently bad, and some of them are quite useful. Nevertheless, each of the applications listed above has several significant drawbacks, making them unsuitable for solving the issue we originally intended to address: the problem of saving time while deciding what to eat in Korea.

4 Problem Statement and Solution

Everyone in modern society has likely experienced the indecision of what and where to eat at least once. This issue typically arises when dining with couples or groups of friends but can also affect individuals. This is a significant problem, as the process of choosing food can be extremely time-consuming. To quantify the time people spend on this activity, studies have been conducted. According to Sheeta Verma (2019), on average, it takes about 20 minutes for people to decide where to eat, and sometimes it can take even longer. If a person eats out at least once a day, this adds up to 7300 minutes per year, which is approximately **122 hours**. This is a substantial amount of time, particularly considering the increasing value people place on their time in today's society. Therefore, it is essential to find a solution to this problem to save people time.

Our approach to this issue is straightforward: we want to assist people in deciding what, where, and which food to eat. To achieve this goal, we are developing a mobile application called SwipeBite. Our solution to the problem includes the following components:

4.1 Tinder-styled Swiping

Tinder, the popular dating app, originally became famous for it innovative and at the same time very simple design: if the user likes the showed person's profile, he should swipe it to the right, and if not then to the left, and when both people swiped each other to the right, then the match occurs and those two are allowed to have a chat. This mechanism became very popular and has been adopted almost by every dating application out there. In SwipeBite, we are planning to use the same technique, but for the food restaurant. By implementing it we hope it will help people to get used to our application, since with high possibility, they have already had experience with this swiping mechanism.

4.2 Connect with Friends

As we have described above, the issue of deciding what to eat is often encountered within a group of friends. Thus, unlike Tinder, our application will be designed not only for couple's usage but also for the circle of people. The user can do it by creating a room and inviting his friends, or, in case the room already exists, one can simple join it and start swiping to choose food.

4.3 Various Filters

One of the important things to consider, while choosing the food is of course the cuisine. For this reason, in SwipeBite the user can choose the food type after entering the room and before starting to swipe. According to this criteria the algorithm will show the restaurants one by one. Moreover, we are going to implement the filtering by the distance, so the user can choose the maximum radius of search, by the parking, whether the parking slots are available or not and by estimated budget.

4.4 The Restaurant's Information

While the swiping activity, the person might get interested about the details of a certain place: the price, working hours etc. For this case, we will have a detailed information of the restaurant inside the profile of it. The user should scroll down in order to view it. The information will include:

- The Name of the place
- The Phone Number
- The working hours
- The estimated budget
- Photos of the restaurant's interior and of its dishes
- The price menu
- The availability of parking slots

By incorporating these features and offering an intuitive and simple user interface, we aim to reduce the time spent making food decisions.

5 Planning in Detail

It is essential for every project to break down into smaller tasks to facilitate the implementation process. Therefore, we will adopt a similar approach for SwipeBite. Our high-level schedule consists of six main phases:

- **Feature Refinement**
  During this stage, we will specify the features to be developed in SwipeBite and understand their implementation processes. We will also determine which frameworks and technologies to use for this project.
- **Crawler implementation**
  Data collection is a critical aspect of our project. As Naver or Google Maps API cannot provide us with the required restaurant information, we have decided to implement our own crawler to gather this data efficiently.
- **Data Cleaning**
  The data obtained through our crawler will likely require formatting and cleaning to make it suitable for use in our database.

- **UX/UI Design**
  User interface design plays a significant role in modern mobile applications. To ensure a sleek and user-friendly design, we have chosen to use Flutter, a popular framework known for its convenience, speed, and flexibility.

- **DB Structure Design**
  Given the need to process restaurant data, implement matching and room creation logic, we will design and develop the database. We plan to utilize Firebase, a free app development platform with cloud storage, for our back-end.

- **Testing**
  After completing the implementation, thorough testing will be our primary focus. We will use the application, identify any bugs or issues, and address them to ensure a smooth user experience.

Our team consists of four individuals, each with assigned roles:

- **Sung Jun Park** - Back-end Team; responsible for developing the crawler and application features.

- **Yujin Juhn** - Back-end Team; responsible for developing the crawler and application features.

- **Shakhzod** - Back-end Team; responsible for setting up the Firebase server and database.

- **Ramon Arias** - Front-end Team; responsible for implementing the UI/UX design using Flutter.

These roles and responsibilities have been allocated to ensure a coordinated and successful project execution.

References

Sheeta Verma, Vivian Quintero (2019). *How Long Does It Take for Someone to Find Where to Eat?* URL: `https://medium.com/yumaroo/how-long-does-it-take-for-someone-to-find-where-to-eat-24aa3ec5a9c2` (visited on 10/02/2023).